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# PRI installation: RT

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## PRI circuit card locations

Each PRI circuit card requires two adjacent slots on a shelf. As many as five circuit cards can be plugged into an empty network shelf, along with the power converter card, depending on the shelf type. See [Tables 49 and 50](#) for card slot positions.

## Cable requirements

Shielded 22 AWG (0.644 mm) cable is recommended for connecting the PRI to the cross-connect point. This cable consists of two shielded twisted-pair conductors and two shields.

The transmit and the receive pairs must be individually shielded and enclosed in a polyvinyl jacket. This type of cable is commonly referred to as “6-conductor” cable. T1 cable shielding should be grounded at the cross-connect point.

To manufacture cables of different lengths than the standard cables provided, refer to [“PRI cabling information” on page 169](#).

See [Figures 10 and 11](#) for cabling arrangements with and without an Echo Cancellor.

The recommended order of PRI connections for the Universal I/O Panel (P0715058) for NT8D11 CE/PE Module (system option 21) follows:

- with Echo Cancellor, J4 and J12 for the T1, J8 for the Echo Cancellor
- without Echo Cancellor, J4, J8, and J12 for the T1s

## Installing the QPC720 PRI

This procedure describes how to install the QPC720 PRI card in an RT.

### Procedure 4

#### Installing the QPC720 PRI in an RT

- 1 Determine the cabinet and shelf location of the circuit card to be installed. The following slots can be used if they are not required for other cards.

**Table 8**

**Shelf and slot location of QPC720 in RT**

| Shelf              | Slot |
|--------------------|------|
| Network            | 5–10 |
| DTI Expansion tier | 2–9  |

- 2 Unpack and inspect circuit cards.
- 3 Set option switches on the PRI circuit card. See [Figure 12](#) and [Table 9](#).
- 4 Install PRI QPC720 card in the assigned shelf and slot.
- 5 Install network QPC414 card (if no network loop connection is available).
- 6 If required, install I/O adapters in I/O panel.
- 7 Run and connect the PRI cables. [Figures 10](#) and [11](#) show the RT PRI cabling. Refer also to [Table 10](#).
- 8 If required, install connecting blocks at MDF or wall-mounted cross-connect terminal.
- 9 If required, designate connecting blocks at MDF or wall-mounted cross-connect terminal.
- 10 If required, install CSU or Echo Canceller.
- 11 Cross-connect PRI cables.
- 12 Add related configuration data into Meridian 1 system memory. Refer to the work order.
- 13 Run PRI verification tests.

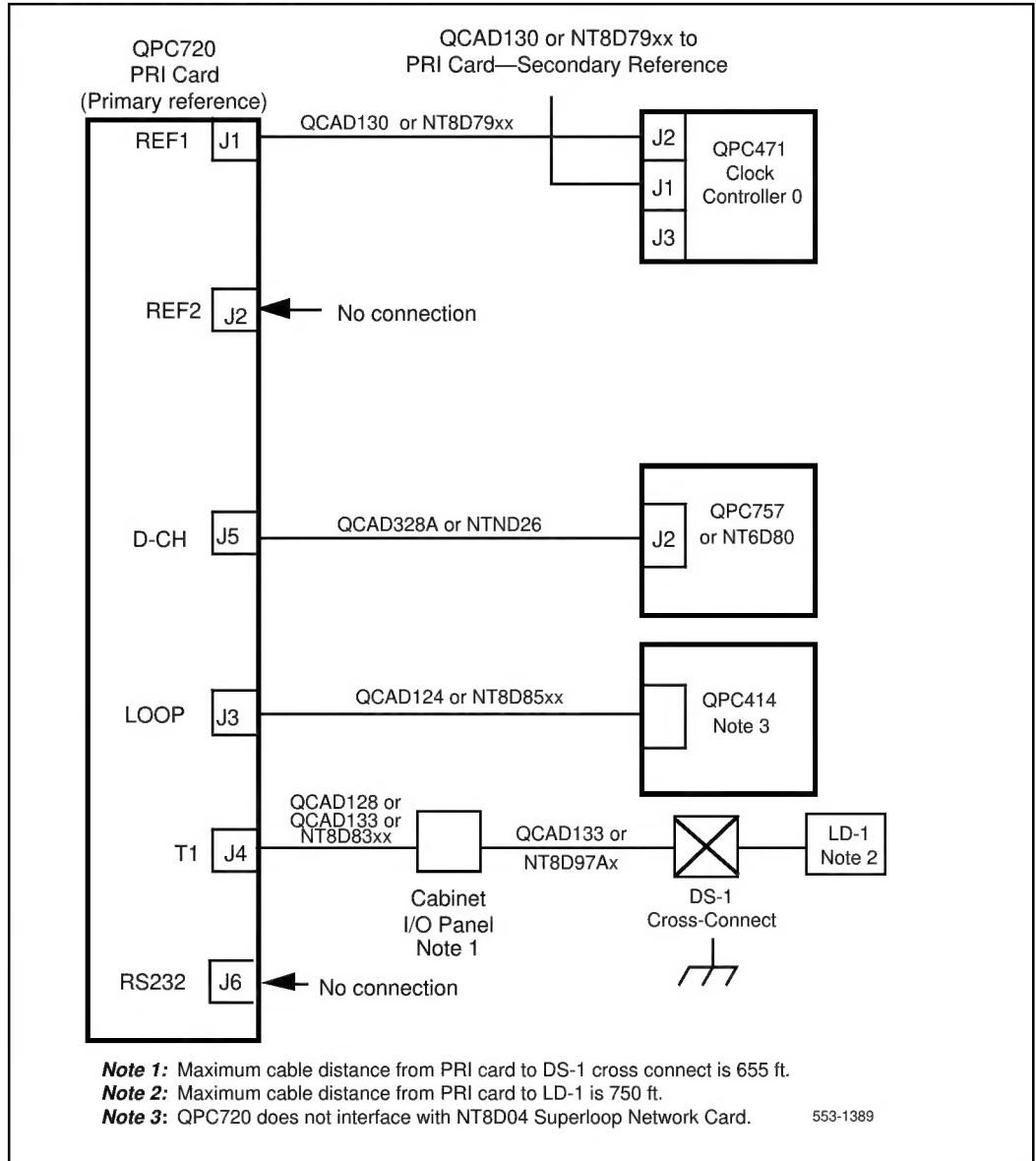
**Table 9**  
**Transmission equalization switch settings for PRI**

| Switch S2 settings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | To repeated facility      | To cross-connect point    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|
| 5 on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0–45 m<br>(0–150 ft)      | 0–30 m<br>(0–100 ft)      |
| 2, 4, 6 on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 46–135 m<br>(151–450 ft)  | 31–100 m<br>(101–355 ft)  |
| 1, 3, 7 on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 136–225 m<br>(451–750 ft) | 101–200 m<br>(356–655 ft) |
| <b>Switch 3 option for DTI with ESF</b><br><br>SW3–1    on    = extended superframe format (ESP)<br>off    = superframe format (SF)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                           |
| <p><b>Note 1:</b> All positions on S2 (location B22) are OFF except as shown under the column labeled “Switch S2 settings.”</p> <p><b>Note 2:</b> The switch 3 option for DTI with ESF applies to only X11 release 16, 17, and 18. All other positions on the 8-pole SW3 (location E37) should be OFF.</p> <p><b>Note 3:</b> Prior to X11 release 19 (releases 16, 17, and 18), you must set the framing format as ESF with the DLOP prompt in LD 17 before you set SW3–1 on the card for the DTI with ESF option.</p> <p><b>Note 4:</b> Beginning with X11 release 19, framing format, line encoding, and method of yellow alarm are selectable for both DTI and PRI in LD 17 with the DLOP, LCMT, and YALM prompts. All SW3 switch positions should be OFF.</p> |                           |                           |

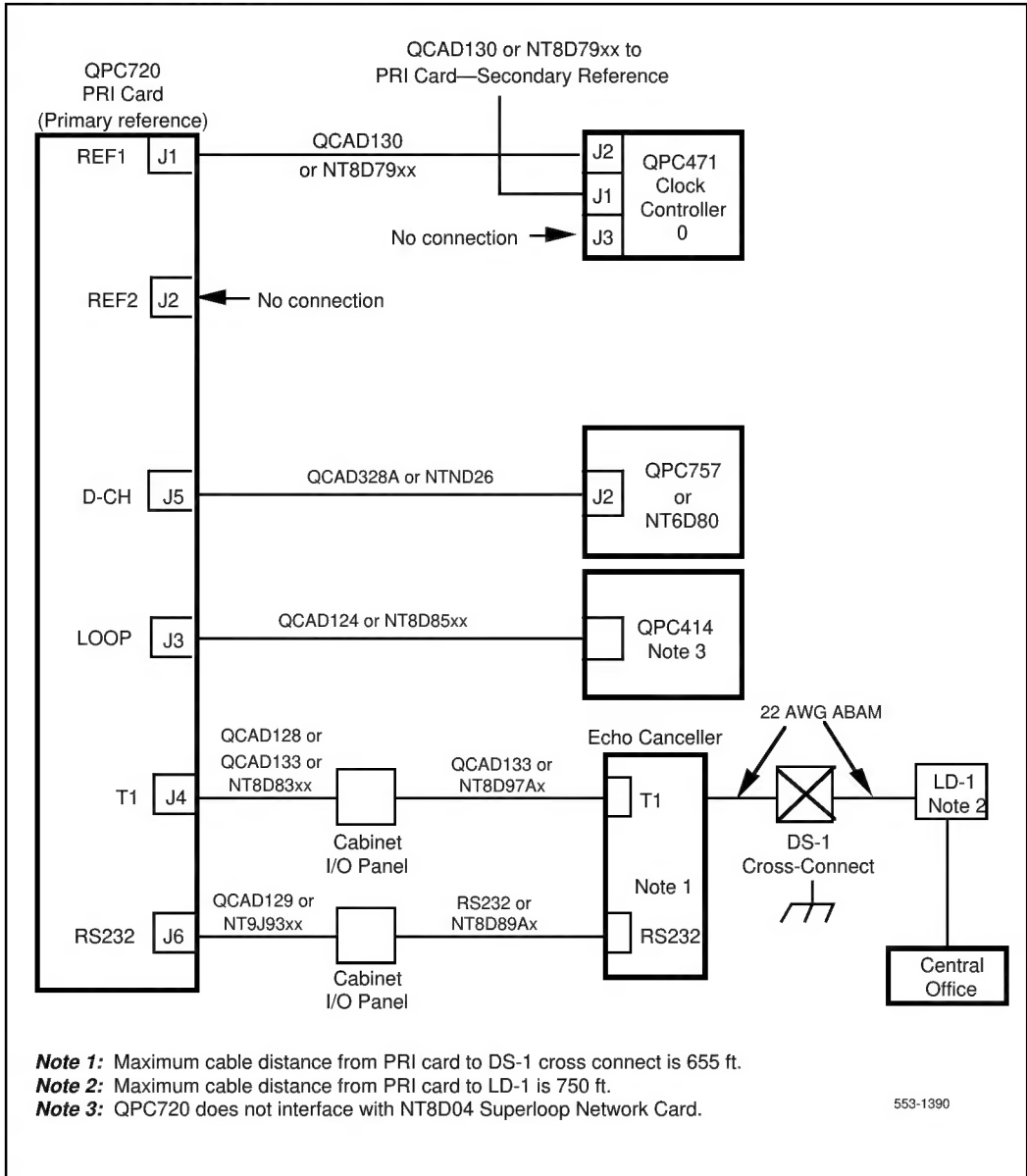
**Table 10**  
**Cable connections and destinations for RT**

| Cable                                                                                                                                | From      | Con | To                | Des  | Con | Comments                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|-------------------|------|-----|-------------------------------------------------------------------------------------------------|
| QCAD130<br>NT8D79xx                                                                                                                  | QPC720    | J1  | QPC471/<br>QPC775 | CC-0 | J2  | Only when primary clock source.                                                                 |
| QCAD130<br>NT8D79xx                                                                                                                  | QPC720    | J1  | QPC471/<br>QPC775 | CC-0 | J1  | Only when secondary clock source.                                                               |
| NTND26                                                                                                                               | QPC720    | J5  | MSDL<br>(NT6D80)  |      |     | X11 release 18 and later.                                                                       |
| QCAD124<br>NT8D85xx                                                                                                                  | QPC720    | J3  | Network           |      |     | Run directly to network card.                                                                   |
| QCAD328A                                                                                                                             | QPC720    | J5  | DCHI              |      | J2  | Run directly to DCHI card.                                                                      |
| QCAD133<br>NT8D83xx                                                                                                                  | I/O Panel |     | Patch<br>panel    |      |     | Run via cabinet I/O panel to CSU, Echo Canceller, or cross-connect terminal.                    |
| QCAD129<br>NT8D93xx                                                                                                                  | QPC720    | J6  | I/O Panel         |      |     | Echo Canceller.                                                                                 |
| RS-232<br>NT8D89Ax                                                                                                                   | I/O Panel |     | Echo<br>canceller |      |     |                                                                                                 |
| RS-232                                                                                                                               | QPC720    | J6  | Echo<br>canceller |      |     |                                                                                                 |
| QCAD133<br>NT8D83xx                                                                                                                  | QPC720    | J4  | Patch<br>panel    |      |     | Run via cabinet I/O panel to cross-connect terminal or Echo Canceller from non-shielded system. |
| <b>Note:</b> No additional cabling is required for multiple PRIs. The D-channel is associated through software in LD 17, prompt PRI. |           |     |                   |      |     |                                                                                                 |

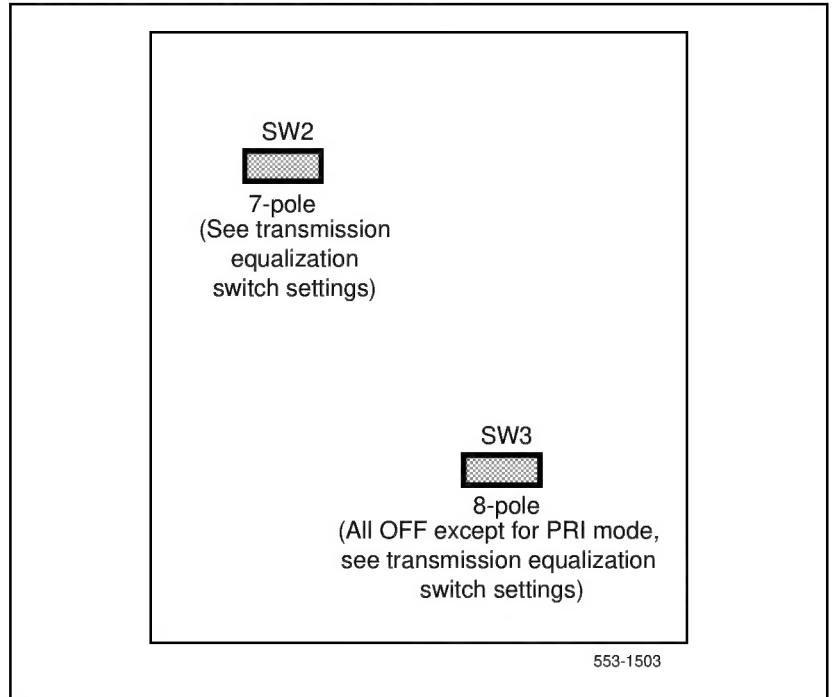
**Figure 10**  
**RT cabling without Echo Cancellor**



**Figure 11**  
**RT cabling with Echo Canceller**



**Figure 12**  
**PRI card (QPC720) switch settings**



## Removing the QPC720 PRI

The following procedure describes how to remove the QPC720 PRI card from the RT.

### Procedure 5

#### Removing the QPC720 PRI from the RT

- 1 Disable the D-channel in LD 96.
- 2 Disable Network Loop using LD 60. The command is DISL x.
- 3 If the circuit card is being completely removed, not replaced, remove data from memory. See *ISDN Primary Rate Interface description and administration* (553-2901-100).
- 4 Determine the location of the circuit cards to be removed.
- 5 Remove cross connections at MDF to wall-mounted cross-connect terminal.
- 6 Disconnect PRI cables at Echo Cancellor and at carrier interface (for example, Office Repeater and NCTE equipment).
- 7 Tag and disconnect cables from card. Rearrange Clock Controller card cables if required. This will affect call processing on DTI/PRI loops.
- 8 Remove PRI and network circuit cards. If the other circuit of a dual network card is in use, DO NOT remove the network card.
- 9 Pack and store circuit card.